FRUIT JUICE MATTERS

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FRUIT JUICE ACROSS THE LIFECYCLE: PREGNANCY

KEY POINTS

- Simple and cost effective way to obtain important nutrients for pregnancy.
- A 150 ml glass of orange juice contains 68% of the Nutrient Reference Value (NRV) for vitamin C and 16% of the NRV for folate.
- Vitamin C improves non-haem iron absorption, helping to support normal iron status.
- 100% fruit juice is a source of fluid, contributing to normal hydration.
- In many countries, a glass of 100% juice contributes to fruit and vegetable goals.

NUTRITION REQUIREMENTS AND CHALLENGES

During pregnancy, it's more important than ever to consume a nutrient-rich diet due to the enhanced need for certain vitamins, minerals and fatty acids. Challenges may include:

Nausea – In the first trimester, women may experience nausea and vomiting, reducing the ability to eat regular meals and a balanced diet.

Folate status – Most women don't take folic acid supplements pre-pregnancy, which are recommended to lower the risk of neural tube disorders.[1] A UK survey found that 75% of women of child-bearing age had a low folate status.[2]

Iron status – Increased blood volume in pregnancy combined with additional need for iron can lead to poor iron status. This is a cause of tiredness and fatigue. One study[3] reported that only 20-35% of European women of reproductive age had sufficient iron stores to complete a pregnancy without supplementary iron.

Hydration – The European Food Safety Authority recommends that pregnant women drink an extra 300 ml of fluid daily, while breastfeeding women should drink an extra 700 ml.[4] Nausea can reduce fluid intake, leading to reduced hydration and constipation.

Omega-3 fatty acids – These are important for supporting foetal brain and eye development[5], yet many people don't eat enough of the main source, oily fish.

100% FRUIT JUICE: BENEFITS IN PREGNANCY

100% 'pure' orange juice is made by squeezing or crushing fruit. This means that the nutritional composition reflects that of the fruit used in the processing. Nutrient values are similar whether juice is 'from concentrate' or 'not from concentrate.' It is prohibited by European law to add sugars, or any other ingredient, to 100% fruit juice regardless of the production method.[6]

The nutritional composition of 100% orange juice per 100 g is shown below. One 150 ml glass contains 60 kcal, 13.6 g of naturally occurring sugars and 55 mg of vitamin C (Nutrient Reference Value is 80 mg). Values in blue represent official 'source of' claims that can be made in Europe.

Nutritional composition of 100% orange juice per 100 ml

Energy	41 kcal
Calcium	11 mg
Iron	0.2 mg
Magnesium	9.5 mg
Phosphorus	15.3 mg
Potassium	152 mg
Zinc	0.06 mg
Vitamin C	36.4 mg
Thiamin	0.08 mg
Riboflavin	0.02 mg
Niacin	0.29 mg
Folate	21.5 µg
Vitamin B6	0.07 mg
Vitamin B12	0.02 mg
Vitamin A	4.1 µg
Vitamin D	0.0 µg
Vitamin E	0.18 mg
Vitamin K	0.08 µg

The nutrients found in 100% fruit juice have recognised roles in supporting normal health as per EU authorised health claims.[5]

- Vitamin C contributes to the protection of cells from oxidative stress and supports normal immune function.
- Vitamin C contributes to normal collagen formation for the normal function of gums and teeth. During pregnancy, there is a higher risk of gum disease and tooth decay.
- Folate contributes to maternal tissue growth during pregnancy and to a reduction in tiredness and fatigue. Drinking fruit juice does not replace the need for a pre-natal multi-vitamin supplement. The folate in orange juice has been shown to be highly bioavailable.[7]
- Potassium contributes to normal muscle function and helps maintain normal blood pressure.

Concerns about recommending pure fruit juices due to their natural sugar content are not supported by evidence from randomised controlled trials. These have shown that:

- 100% orange juice has a similar glycemic index (GI) to whole oranges (50 versus 43) and both are classed as low GI.[8] In addition, a meta-analysis of randomised controlled trials found that 100% fruit juice had no significant impact on glucose control, insulin sensitivity or risk of type 2 diabetes.[9] There is also no evidence that drinking 100% fruit juice influences the risk of gestational diabetes.
- 100% orange juice has significantly more favourable effects on fat mass and glycemic control than a sugar-sweetened soft drink.[10]
- 100% orange juice has no impact on body weight or fat when consumed daily.[11] There is also no evidence that drinking a small glass of fruit juice regularly leads to excess weight gain in pregnancy.

INCLUDING FRUIT JUICE IN THE DIET

Depending on your country's guidelines, a portion of 100% fruit juice can be 150-250 ml per day (around one small glass) and counts towards fruit and vegetable targets.

As vitamin C enhances the bioavailability of non-haem iron (for example, from fortified foods, supplements and green leafy vegetables), fruit juice is best consumed with a meal. The role of vitamin C as an enhancer of non-haem iron is so significant that expert panels considered its impact when developing Dietary Reference Values.[12,13]

Fruit juice is 90% water and can contribute towards fluid requirements, thus supporting normal hydration. There is anecdotal evidence that fruit juice may be helpful for constipation and morning sickness.

TIPS FOR PATIENTS

Fruit Juice Matters has created a linked one-page leaflet, **Why fruit juice? FOR PREGNANCY**, which you may find useful to give to your patients. Click here to download a copy.

Disclaimer: Every effort has been made to ensure that the information contained in this document is reliable and has been verified. The information is intended for non-commercial communication to health care professionals only. The information given in this dossier does not constitute dietary advice.

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